Patch Release Note

Patch SB251-09 For SwitchBlade 4000 Series Switches and AT-9800 Series Switches

Introduction

This patch release note lists the issues addressed and enhancements made in patch SB251-09 for Software Release 2.5.1 on existing models of SwitchBlade 4000 Series Switches and AT-9800 Series Switches. Patch file details are listed in Table 1.

Table 1: Patch file details for Patch SB251-09.

Base Software Release File	sb-251.rez
Patch Release Date	26-May-2003
Compressed Patch File Name	sb251-09.paz
Compressed Patch File Size	100592 bytes

This release note should be read in conjunction with the following documents:

- SwitchBlade Documentation Set for Software Release 2.5.1 (Document Number C613-03057-00 Rev A).
- AT9800 Series Switches Documentation Set for Software Release 2.5.1 (Document Number C613-03056-00 Rev A)
- Release Note for Software Release 2.5.1 for SwitchBlade 4000 Switches and AT-9800 Series Switches (Document Number C613-10354-00 Rev D) available on the Documentation and Tools CD-ROM packaged with your switch, or from *www.alliedtelesyn.co.nz/documentation/documentation.html*.

WARNING: Using a patch for a different model or software release may cause unpredictable results, including disruption to the network. Information in this release note is subject to change without notice and does not represent a commitment on the part of Allied Telesyn International. While every effort has been made to ensure that the information contained within this document and the features and changes described are accurate, Allied Telesyn International can not accept any type of liability for errors in, or omissions arising from the use of this information.

Some of the issues addressed in this Release Note include a level number. This number reflects the importance of the issue that has been resolved. The levels are:

Level 1 This issue will cause significant interruption to network services, and there is no work-around.

Level 2 This issue will cause interruption to network service, however there is a work-around.

Level 3 This issue will seldom appear, and will cause minor inconvenience.

Level 4 This issue represents a cosmetic change and does not affect network operation.

Features in SB251-09

Patch SB251-09 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 02577 Module: IPG, LOG Level: 4

The ability to log MAC addresses whenever the ARP cache changes has been added. To enable this, use the command:

```
ENABLE IP ARP LOG
```

To disable it, use the command:

```
DISABLE IP ARP LOG
```

The logging of MAC addresses is disabled by default. Use the SHOW LOG command to view the MAC addresses that have been logged when the ARP cache changes.

PCR: 03295 Module: IP Level: 1

IP ARP entries were not being written to the hardware route table. This issue has been resolved.

PCR: 02518 Module: SWI Level: 1

An open issue previously recorded under this PCR number has been resolved. The first entry in the VLAN Tag table was being corrupted when a valid L2MC table entry was incorrectly written to CAM entry 0. The source of this VLAN Tag table corruption has been removed.

PCR: 03596 Module: SWI Level: 1

IPX routes that were added statically, or learned dynamically via RIP, were only added to the switch instance that the route was learned for. IPX routes are now added to all switch instances if the route is local or was added statically. Dynamically learned routes are now added to any switch instance with the same amount of CAM (or more) than the instance that the route was learned on.

PCR: 03597 Module: IPG Level: 1

The ARP table was sometimes not updated when an ARP *Reply* was received on a SwitchBlade port in response to an ARP *Request*. This issue has been resolved.

Features in SB251-08

Patch file details are listed in Table 2:

Table 2: Patch file details for Patch SB251-08.

Base Software Release File	sb-251.rez
Patch Release Date	14-May-2003
Compressed Patch File Name	sb251-08.paz
Compressed Patch File Size	86524 bytes

Patch SB251-08 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 03251 Module: SWI Level: 2

A fatal error occurred when the ADD SWITCH TRUNK command specified an invalid port. This issue has been resolved.

PCR: 03414 Module: SWI Level: 2

A fatal error occurred when removing a line card from a SwitchBlade if STP was enabled. This issue has been resolved.

PCR: 03466 Module: SWI Level: 2

System performance was low when adding large numbers of entries to CAM. This issue has been resolved. CAM is now initialised to allow better performance, especially for the addition of ARP and IP entries.

PCR: 03470 Module: SWI Level: 2

The DELETE SWITCH TRUNK PORT command could cause an unrelated port to stop forwarding packets, or learn new MAC addresses. This issue has been resolved so that unrelated ports are not affected by the trunk group port deletion.

PCR: 03509 Module: SWI Level: 2

All IP routes were being added to all switch instances. This caused issues on SwitchBlade line cards that did not have enough CAM to store the routes, and the line card did not always need every route. IP routes are now only added:

- to a switch instance if the route was learned on that instance
- if the route is for an interface
- if the route was added statically, or
- if the switch instance has a CAM which is the same size or larger than the CAM of the switch instance that the route was learned on.

PCR: 03518 Module: SWI Level: 3

An issue exists where the CAM entry 0 in the VLAN Tag table is either not updated or is being overwritten with invalid data. This PCR adds debugging to trace the fault.

Features in SB251-07

Patch file details are listed in Table 3:

Table 3: Patch file details for Patch SB251-07.

Base Software Release File	sb-251.rez
Patch Release Date	22-Apr-2003
Compressed Patch File Name	sb251-07.paz
Compressed Patch File Size	86524 bytes

Patch SB251-07 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 03399 Module: STP, SWI Level: 1

With this enhancement:

- STP and Port Trunking now work together correctly.
- BDPU Forwarding is implemented. The BPDU Forwarding feature configures the switch to forward all received STP BPDUs. Under normal circumstances, the switch will not forward any received STP BPDUs, even if STP is enabled.

This implementation is for standard STP, it does not guarantee that RSTP and port trunking will work correctly together in all situations.

STP does not update the pathcost for trunked ports, which means that a trunk group has the same pathcost as a single port. This may cause STP Blocking where it is not expected. To overcome this, the user should explicitly set the pathcost for the trunk group ports to be less than the default value for a single port.

STP reconfigures if the Master port in a trunk group goes link down. If the Master port in a trunk group goes link down, and a Non-Master port is still link-up, then STP will go through the Listening>Learning>Forwarding reconfiguration on the new Master port. This means that there will be a switching outage on the trunk group whilst the new Master port transitions to the Forwarding state.

Command handler changes:

- The PORT parameter of the CREATE SWITCH TRUNK PORT and ADD SWITCH TRUNK PORT commands must specify ports that have identical STP port configurations.
- The ENABLE STP and ENABLE STP PORT commands cannot be used to enable STP operation on a port that has been disabled from STP operation because of Port Trunking. Only the Master port in a trunk group actively participates in the STP algorithm. Non-Master ports in the trunk group are in the STP Disabled State.
- The output for the SHOW STP PORT command has been modifed so that Non-Master Ports in a trunk group do not take part in the STP algorithm.
- The output for the SHOW STP PORT command has been modified so that it displays whether a user has set the PATHCOST value, or if it was auto-configured.

- The PORT parameter of the SET STP PORT command specifies either all the ports in a trunk group, or none of the ports in a trunk group.
- The STPFORWARD parameter has been added to the ENABLE SWITCH and DISABLE SWITCH commands. If STPFORWARD is enabled, and there is no enabled STP instance, then the switch will forward all received BPDUs. If STPFORWARD is enabled, and an STP instance is enabled, then STPFORWARD will be disabled by default and a message will be generated.
- The SHOW SWITCH command now shows the status of the BPDU Forwarding feature.

PCR: 03401 Module: SWI

An enhancement has been made to the Test module to optimise the reception of the loopbacked packets that are used to confirm operation of the switch ports.

Features in SB251-06

Patch file details are listed in Table 4.

Table 4: Patch file details for Patch SB251-06.

Base Software Release File	sb-251.rez
Patch Release Date	10-Apr-2003
Compressed Patch File Name	sb251-07.paz
Compressed Patch File Size	79684 bytes

Patch SB251-06 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 03340 Module: SWI, SYSR Level: 1

After a power cycle, or a reboot command, the SwitchBlade would occasionally repeatedly restart if it had two active controller cards. Also, the Slave controller card would sometimes not take over if the Master controller card failed.

Features in SB251-05

Patch file details are listed in Table 5.

Table 5: Patch file details for Patch SB251-05.

Base Software Release File	sb-251.rez
Patch Release Date	31-Mar-2003
Compressed Patch File Name	sb251-05.paz
Compressed Patch File Size	71096 bytes

Patch SB251-05 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 03281 Module: SWI Level: 2

Specifying the PORT and SPEED parameters with the CREATE SWITCH TRUNK command did not set ports in a trunk group to advertise the correct trunk group speed and duplex mode. This issue has been resolved.

PCR: 03313 Module: SWI Level: 1

A power cycle on the switch could cause the console port to become frozen if a port was in a link up state. If a port went into a link down state, then the console port became unfrozen. If RESTART REBOOT or RESTART SWITCH commands were used, then the console port functioned correctly. This issue has been resolved.

Features in SB251-04

Patch file details are listed in Table 6.

Table 6: Patch file details for Patch SB251-04.

Base Software Release File	sb-251.rez
Patch Release Date	24 -Mar-2003
Compressed Patch File Name	sb251-04.paz
Compressed Patch File Size	71112 bytes

Patch SB251-04 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 03226 Module: SWI Level: 2

An internal misconfiguration of memory occurred when an M3 control card and an M5 control card were installed, and the M3 control card was acting as the Master. This could cause unexpected restarts. This issue has been resolved.

PCR: 03228 Module: SWI Level: 1

On a 48 port line card, or a 32F card, if Port 1 went down, or was disconnected, then traffic on Port 13 was also stopped, and vice versa. The same issue affected other pairs of ports. This issue has been resolved.

PCR: 03230 Module: SWI Level: 2

Port speeds on trunk ports sometimes had to be set using the SET SWITCH PORT command instead of automatically adopting the trunk group speed. If a port was added to a trunk group and the port status was ‘up’, (that is, it was correctly connected to another port) then the trunk group speed should have applied to all the ports in the trunk, but it did not. Similarly, if a port was added to a trunk group, and the port status was ‘down’, but it was later linked correctly, then the trunk group speed should have applied to the ports in the trunk. This issue has been resolved.

PCR: 03243 Module: SWI Level: 2

After autonegotiation had finished between two ports, the port on the SwitchBlade would not show link up status when the SHOW SWITCH PORT command was executed. The autonegotiation process is now restarted if autonegotiation is completed and the link is shown as down.

PCR: 03249 Module: SWI Level: 4

The LEDs on line cards now continue to flash when activity exists. Previously if a cable was connected and disconnected to Line 48 and G8 ports, with traffic being transmitted from the other end, then the LED would stop flashing, even when there was activity on the link.

Features in SB251-03

Patch file details are listed in Table 7.

Table 7: Patch file details for Patch SB251-03.

Base Software Release File	sb-251.rez
Patch Release Date	12-Mar-2003
Compressed Patch File Name	sb251-03.paz
Compressed Patch File Size	68784 bytes

Patch SB251-03 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 02361 Module: SWI Level: 4

The SwitchBlade mirror port field on the second instance of a switch chip was displaying as though it was the first instance. For example, if 2.26 was configured as the mirror port, the GUI mirror object would return 2.2. The first chip instance was not affected. This issue has been resolved.

PCR: 02527 Module: TCP Level:3

TCP6 did not send a *TCP Reset* message under some circumstances, for example when the Telnet server was disabled. This issue has been resolved.

PCR: 03025 Module: GUI Level:2

A buffer address was incrementing and not returning buffers for reuse when the command line interface was accessed via the GUI interface. This issue has been resolved.

PCR: 03055 Module: SWI Level: 4

If the SET SWITCH BLADE command was executed with the default settings, then the default settings were added to the configuration file. The SET SWITCH BLADE settings are now only added to the configuration file if they differ from the default settings.

PCR: 03060 Module: CORE, SWI Level: 3

Support has been added, to the MIB-2 interface MIB, for the port interface. This means that port counters can now be shown.

PCR: 03066 Module: SWI Level: 2

If a hardware filter was added to the switch, with a source VLAN and a destination port of 1, then a host connected to the switch could not PING a host on a different port. This issue has been resolved.

PCR: 03071 Module: CORE Level: 2

An unexpected restart that occurred when upgrading a SwitchBlade from Release 2.4.4 to Release 2.5.1 was caused by NVS generating an SNMP trap. This issue has been resolved.

PCR: 03079 Module: IPG, SWI Level: 1

Static routes were occasionally not added to all hardware tables across all instances. This would affect connectivity if an instance had a default route added to its table that pointed out one of its ports. This issue has been resolved.

PCR: 03088 Module: SWI Level: 2

Ports could not be added to the default VLAN after a hotswap, if the default VLAN was Protocol, Subnet, MAC address, or Limited protocol based. This issue has been resolved.

PCR: 03105 Module: FIREWALL Level: 3

Incorrect handling of TCP sessions, and poor load balancing performance could be caused by TCP virtual balancers not selecting a new resource if required. This issue has been resolved.

PCR: 03112 Module: IPV6 Level: 3

The ADD IPV6 ND command now has a PORT parameter which means that it can be associated with the VLAN parameter.

PCR: 03118 Module: CORE Level: 4

Changes have been made to the *SysDescription*.

PCR: 03119 Module: CLASSIFIER Level: 4

TCP source and TCP destination ports were swapped when viewed in the GUI. This issue has been resolved.

PCR: 03138 Module: SWI L evel: 2

Packets that were sent out a default route could have an incorrect source IP address, if the interface route to the destination IP address existed but was down. This issue has been resolved.

PCR: 03141 Module: IPG Level: 3

Packets could be sent with an incorrect source address if a route was added to a VLAN and another VLAN had an IP interface configured that was in the same subnet as the route. This issue has been resolved.

PCR: 03142 Module: SWI Level: 1

If a BIST was run at low temperatures, for example 5 or 10 degress celcius, on a G8 card, then a watchdog timer restart could occur. The switch now checks for the real course of the external interrupts that occur when running BIST.

PCR: 03148 Module: IPG Level: 3

If the Gratuitous ARP feature was enabled on an IP interface, and an ARP packet arrived, (either ARP request, or reply) that had a Target IP address that was equal to the SenderIP address, then the ARP cache was not updated with the ARP packet's source data. This issue has been resolved.

PCR: 03191 Module: SWI Level: 1

If two line cards were inserted in quick succession, then a software restart could occasionally occur. This issue has been resolved.

PCR: 03192 Module: SWI Level: 2

When the Built-In Self Test was run, a fault would occasionally be reported which said that a MAC address was not learnt during the loopback test. The ports in the BIST loopback test now remain in loopback.

Features in SB251-02

Patch file details are listed in Table 8:

Table 8: Patch file details for Patch SB251-02.

Base Software Release File	sb-251.rez
Patch Release Date	25-Jan-2003
Compressed Patch File Name	sb251-02.paz
Compressed Patch File Size	48608 bytes

Patch SB251-02 includes all issues resolved and enhancements released in previous patches for Software Release 2.5.1, and the following enhancements:

PCR: 02553 Module: SWITCH Network affecting: No

64 bit MIB counters were not incremented or cleared for port interfaces. This issue has been resolved.

PCR: 02574 Module: DVMRP Network affecting: No

Some change actions, and the resending of prune messages were not operating correctly. This issue has been resolved.

PCR: 02582 Module: SWI Network affecting: No

Pause flow control is now disabled by default on all ports. This improves performance of the switch when it is congested.

The DPORT parameter in the ADD SWITCH HWFILTER command was omitted when the configuration was generated. This issue has been resolved.

PCR: 03023 Module: SWI Network affecting: No

The SET SWITCH PORT ACCEPTABLE command did not work correctly on all specified port numbers. This issue has been resolved.

PCR: 03028 Module: SWI Network affecting: No

A warning message was generated when a slave line card was not initialised, and the configuration script was not loaded. This issue has been resolved.

PCR: 03030 Module: SWI Network affecting: No

RIP was not operating correctly because a MAC address search returned the wrong port number. This issue has been resolved.

PCR: 03031 Module: FIREWALL Network affecting: No

The ADD FIREWALL POLICY RULE command included an erroneous check on port ranges for non-NAT rules. This check is now restricted to NAT rules.

PCR: 03034 Module: SWI Network affecting: No

Executing the SET IP INTERFACE and SET IPX INTERFACE commands on a SwitchBlade produced debugging output on the ASYN port. This issue has been resolved.

PCR: 03037 Module: QOS Network affecting: No

A new value is now shown in the output of the SHOW QOS POLICY command. This is the value of the port bandwidth used when the default traffic class percentage bandwidth is set on a QoS Policy.

PCR: 03039 Module: SWITCH, IPG Network affecting: No

Adding a layer 2 filter on a SwitchBlade did not block traffic to the end host as intended. This issue has been resolved.

PCR: 03043 Module: SWITCH Network affecting: No

On a SwitchBlade, PCI errors occurred periodically after a line card was hotswapped. This issue has been resolved.

PCR: 03047 Module: CORE Network affecting: No

The board revision number for the slave control blade was erroneously set to the same number as the master control blade. This issue has been resolved.

PCR: 03428 Module: STP Network affecting: No

If a port belongs to an enabled STP instance, but the port has been disabled from STP operation with the DISABLE STP PORT command, the port will not respond to ARP requests. This patch implements a workaround that allows disabled STP ports to respond to ARP requests.

Features in SB251-01

Patch file details are listed in Table 9:

Table 9: Patch file details for Patch SB251-01.

Base Software Release File	sb-251.rez
Patch Release Date	15-Jan-2003
Compressed Patch File Name	sb251-01.paz
Compressed Patch File Size	71828 bytes

PCR: 02555 Module: SWI Network affecting: No

Layer 2 filtering is now working correctly.

PCR: 02561 Module: SWI Network affecting: No

32 bit counters now only show 8 bit contents.

PCR: 02563 Module: SWI Network affecting: No

The IPM (Layer 3 Multicasting table) now updates correctly to add or delete the ingress linecard to control blade ports, and the control blade to egress linecard ports when updating forwarding.

PCR: 02568 Module: CORE Network affecting: No

The ENABLE SYSTEM SECURITY_MODE command was enabling the system security mode, but after the switch was restarted the system security mode was disabled again. Also, when NVS was re-initialised because, for example a battery had been exhausted, the system could not make an SNMP trap. These issues have been resolved.

PCR: 02576 Module: SWI Network affecting: No

When the DISABLE SWITCH PORT FLOW=PAUSE command was executed on a port or ports, they would still appear to be enabled at a higher level. This issue has been resolved.

PCR: 02396 Module: DHCP Network affecting: No

DHCP RENEW request messages are now unicast (as defined in the RFC), not broadcast.

PCR: 02575 Module: SWI Network affecting: No

VLAN tagged multicast packets were incorrectly being sent over untagged VLAN interfaces. This issue has been resolved.

PCR: 02574 Module: DVMRP Network affecting: No

Some change actions, and the resending of prune messages were not operating correctly. This issue has been resolved.

PCR: 02582 Module: SWI Network affecting: No

Pause flow control is now disabled by default on all ports. This improves performance of the switch when it is congested.

PCR: 02587 Module: OSPF Network affecting: No

When OSPF was enabled on startup, an OSPF interface would sometimes stay in the DOWN state. This issue has been resolved.

PCR: 03001 Module: SWI CLASSIFIER Network affecting: No

The following parameters have been changed CREATE CLASSIFIER, SET CLASSIFIER and SHOW CLASSIFIER commands:

- The MACTYPE parameter has been changed to MACTYPE={L2UCAST | L2MCAST | L2BCAST | ANY}. This resolves an error with internal hardware tables.
- The number of user-specified protocols in the PROTOCOL parameter has been increased from three to seven.
- The minimum value of the IPXDADDRESS parameter has been decreased from 10000000 to 00000001.

PCR: 03006 Module: SWI Network affecting: No

An issue which sometimes resulted in a broadcast storm within the internal ports on the SwitchBlade, a reduction in bandwidth, and a loss of pinging has been resolved.

PCR: 3008 Module: SWI Network affecting: No

An issue which caused pings to fail when a control card was inserted in the left hand slot to act as a slave, has been resolved.

PCR: 03014 Module: IPG, SWI Network affecting: No

Support has been added to allow for multicasting to any number of overlapping VLANs up to the maximum number of multicast forwarding entries.

PCR: 03018 Module: SWI Network affecting: No

An issue with pings failing after network host routes disappeared from the switch due to an IP hashing error has been resolved.

PCR: 03020 Module: SWI Network affecting: No

An issue with an interrupt occurring when waiting on the MDIO which caused the MDIO to read or write incorrect information has been resolved.

PCR: 03021 Module: SWI Network affecting: No

Ping would sometimes not work correctly after a 48 line card was extracted, and after a restart reboot. This issue has been resolved.

Availability

Patches can be downloaded from the Software Updates area of the Allied Telesyn web site at *www.alliedtelesyn.co.nz/support/updates/patches.html*. A licence or password is not required to use a patch.